

In the Claims

Please amend the claims as detailed herein below. The following list of claims will replace all prior versions and listings of claims in the application.

1-5. (Cancelled)

6. (New) A liquid tank composed of unit panels, comprising:

a foundation plate;

a tank body having a bottom surface, a ceiling surface, and side surfaces, the bottom surface and the ceiling surface of the tank body constructed with a plurality of first unit panels coupled together, and the side surfaces of the tank body constructed with a plurality of second unit panels coupled together;

wherein the first unit panels forming the bottom surface of the tank body are disposed on the foundation plate;

wherein each of said first unit panels has a layered structure with a first layer of polyethylene disposed to an inner surface of the tank body, a second layer of galvanized iron plate secured on an outer surface of the first polyethylene layer, and a third layer of thermal insulation layer made of foamed urethane on an outer surface of the second layer of galvanized iron plate;

wherein each of said second unit panels has a layered structure with a first layer of polyethylene disposed to an inner surface of the tank body, a second layer of galvanized iron plate secured on an outer surface of the first polyethylene layer, and a third layer of thermal insulation layer made of foamed urethane on an outer surface of the second layer of galvanized iron plate, and a fourth layer of painted color steel plate on an outer surface of the third layer of foamed urethane;

wherein each of said first and second unit panels has edge portions each bent and extending outwardly from the unit panel, the edge portions of the first unit panels having

said layered structure with said first layer of polyethylene, said second layer of galvanized iron plate, and said third layer of foamed urethane, and the edge portions of the second unit panels having said layered structure with said first layer of polyethylene, said second layer of galvanized iron plate, said third layer of foamed urethane, and said fourth layer of painted color steel plate;

an inlet pipe communicating with an upper portion of the tank body;

an outlet pipe communicating with a lower portion of the tank body;

a plurality of stay reinforcement members, each of the stay reinforcement members having a first end attached to a corner area of neighboring stay reinforcement members of the bottom surface of the tank body, and a second end attached to a corner area of neighboring stay reinforcement members of the ceiling surface of the tank body, the attachment area of said first end located at opposing location from that of said second end;

a plurality of beam reinforcement members, each of the beam reinforcement members having a first end attached to a corner area of neighboring beam reinforcement members of one of the side surfaces of the tank body, and a second end attached to a corner area of neighboring beam reinforcement members of another side surface of the tank body, the attachment area of said first end located at opposing location from that of said second end; and

a plurality of securing means provided to secure said edge portions of neighboring unit panels of the tank body, each of said securing means including a securing screw for penetrating and securing said edge portions of neighboring unit panels, and a nut secured at an end of the securing screw.

7. (New) The liquid tank of claim 6, further comprising:

an overflow pipe communicating with an upper portion of the tank body;

a drain pipe communicating with a lower portion of the tank body; and

a ladder installed at an outer wall of the tank body for accessing inner area of the tank.

8. (New) The liquid tank of claim 6, wherein each of the unit panels includes an engagement member of rigid material and having a circular through hole to which said securing screws of said securing means are to be coupled.

9. (New) The liquid tank of claim 8, wherein the through hole of said engagement member of each unit panel is sealed with polyethylene filled therein.

10. (New) The liquid tank of claim 6, wherein the stay reinforcement members are at least partially welded to their corresponding beam reinforcement members.

11. (New) A unit panel for a liquid tank, the unit panel having a layered structure and comprising:

a first layer of polyethylene, the first layer having a generally C-shaped cross-section with an upper surface portion, a side surface portion extending vertically from side edges of the upper surface portion, and a lower surface portion extending vertically from side edges of the side surface portion and in generally parallel with the upper surface portion to form a terminal lower edge surface of the unit panel;

a second layer of thermal insulation layer made of foamed urethane, the second layer disposed to an inner space defined by the upper, side, and lower surface portions of the generally C-shaped first layer;

a third layer of painted color steel plate, the third layer having a generally C-shaped cross-section with an upper surface portion and a side surface portion extending vertically from side edges of the upper surface portion, wherein a terminal end of the side surface portion of the third layer is affixed to a terminal end of the lower surface portion

of the first layer such that the second layer of insulation layer is secured in the space defined between the first and third layers and not exposed externally, and wherein the upper and side surface portions of the first, second, and third layers of the unit panel include a plurality of securing holes formed there-through; and

a plurality of tubular engagement members made of rigid material, the engagement members coupled in at least some of the securing holes of the upper and side surface portions of the first, second, and third layers, each tubular engagement member having a circular through hole formed there-through, wherein at least some of the through holes of the tubular engagement members are sealed with polyethylene filed therein.

12. (New) The unit panel of claim 11, wherein all of the through holes of the tubular engagement members are sealed with said polyethylene.

13. (New) A unit panel for a liquid tank, the unit panel having a layered structure and comprising:

a first layer of polyethylene, the first layer having a generally C-shaped cross-section with an upper surface portion, a side surface portion extending vertically from side edges of the upper surface portion, and a lower surface portion extending vertically from side edges of the side surface portion and in generally parallel with the upper surface portion to form a terminal lower edge surface of the unit panel;

a second layer of galvanized iron plate having a surface contour substantially the same as that of the first layer and secured on an inner face surface of the first polyethylene layer; and

a third layer of thermal insulation layer made of foamed urethane, the third layer secured on an inner face surface of the second layer opposite to the surface on which the first layer are secured,

wherein the unit panel further comprises a plurality of securing holes formed there-through,

wherein the unit panel further comprises a plurality of tubular engagement members made of rigid material, the engagement members coupled in at least some or all of the securing holes of the unit panel, each tubular engagement member having a circular through hole formed there-through, wherein at least some or all of the through holes of the tubular engagement members are sealed with polyethylene filed therein.